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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/464,557	12/16/1999	BRIAN D. GANTT	30566.71US01	7734

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EXAMINER

TRAN, MYLINH T

ART UNIT	PAPER NUMBER
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2174

DATE MAILED: 07/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/464,557

Applicant(s)

GANTT, BRIAN D.

Examiner

Mylinh T Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed 05/15/02.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-16, 18-24 and 26-27 is/are rejected.
- 7) ☒ Claim(s) 7, 17 and 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Applicant's Amendment filed on 05/15/02 has been entered and carefully considered.

However, arguments regarding rejections under 35.U.S.C 103 has not been found to be persuasive. Therefore, these claims are rejected under the same ground of rejection as set forth in the Office Action mailed 02/14/02.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 10-16, and 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeda [US.6,166,718] in view of Frasier et al. [US.5,268,677] and further in view of Lumelsky et al. [US.5,162,779].

As to claims 1, 10 and 11, Takeda discloses displaying the three-dimensional space on a monitor attached to the computer (see abstract). Takeda cites "A cursor is displayed in a three-dimensionally displayed field as a plurality of cursor images three-dimensionally in a vertical array in the field..." read as the displaying the three-dimensional space; moving a cursor through the two-dimensions of the three-dimensional space according to a position of an input device attached to the computer and determining a position of the cursor within the three-dimensional space relative to the two-dimensions (see column 2, lines 16-28). Takeda cites "...display means for displaying a field and a cursor three-dimensionally, ...for setting a three-dimensional coordinate value of a selected position in the field, setting a plurality of

three-dimensional coordinate value of a selected position in the field, setting a plurality of three-dimensional coordinate values based on the three-dimensional coordinate value....” read as moving the cursor through the two-dimensions of the three-dimensional space according to a position of the input device and determining the position of the cursor. The difference between Takeda and the claim are the two-dimensional viewport of the three-dimensional space and the generating a visual representation of the cursor to indicate the position of the cursor within the three-dimensional space relative to the two-dimensional viewport. Frasier et al. shows two-dimensional viewport of the three-dimensional space (see abstract) Frasier et al. cites “A reduced viewport feature for a graphics display system...A two-dimensional input image plane in the form of a wireframe is transformed to a three-dimensional image...mapped as a two-dimensional projection onto the graphics display...” read as the two-dimensional viewport. It would have been obvious to one of ordinary skill in the art, having the teachings of Takeda and Frasier et al. before them at the time the invention was made to modify the position of the cursor within the three-dimensional space taught by Takeda to include the two-dimensional viewport of Frasier et al., in order to reduce the size of the normally visible area outside the viewing area as taught by Frasier et al. While Frasier et al. teaches the displaying the two-dimensional viewport of the three-dimensional space. Lumelsky et al. teaches generating a visual representation of the cursor to indicate the position of the cursor within the three-dimensional space relative to the two-dimensional viewport (see abstract). Lumelsky et al. cites “To further enhance the perception of depth, monoscopic depth cues are provided by varying the cursor’s color, size, transparency and/or pattern as the cursor moves in depth” read as the visual representation of the cursor. It would have been obvious to one of ordinary skill in the art, having the teachings of Takeda, Frasier et al. and Lumelsky et al. before them at the time the invention

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was made to modify the position of the cursor within the three-dimensional space relative to the two-dimensional viewport as taught by Takeda and Frasier et al. to include the visual representation of the cursor of Lumelsky et al.

As to claims 2, 12 and 20, Lumelsky et al. also discloses wherein the generating step comprises generating the visual representation of the cursor using one or more human recognizable metaphors for three-dimensional distance cueing in order to provide an extra dimension of visual feedback to the operator navigating the cursor through the three-dimensional space related to the two dimensional viewport (column 3, lines 65 through column 4, lines 24).

As to claims 3, 5, 13, 15, 21 and 23, Lumelsky et al. teaches the generating step comprises varying a brightness of the cursor to indicate the position of the cursor within the three-dimensional space relative to the two-dimensional viewport and the generating step comprises varying a color of the cursor to indicate the position of the cursor within the three-dimensional space relative to the two-dimensional viewport (column 3, lines 65 through column 4, lines 10).

As to claims 4, 14 and 22, Lumelsky et al. also teaches the generating step comprises varying a reflectivity of the cursor to indicate the position of the cursor within the three-dimensional space relative to the two-dimensional viewport (column 2, lines 38-64).

As to claims 6, 16 and 24, Lumelsky et al. shows the generating step comprises varying a composition of the cursor to indicate the position of the cursor within the three-dimensional space relative to the two-dimensional view-port (column 4, lines 31-45).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8, 9, 18, 19, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeda [US.6,166,718] in view of Frasier et al. [US.5,268,677], further in view of Lumelsky et al. [US.5,162,779] and further in view of Caddy [US. 4,578,766].

As to claims 8, 9, 18, 19, 26 and 27, the difference between Takeda, Frasier et al., Lumelsky et al., and the claim are the generating step comprises adding and subtracting projection lines to the cursor to indicate the position of the cursor within the three-dimensional space relative to the two-dimensional viewport and the generating step comprises adding and subtracting tag along characters to the cursor to indicate the position of the cursor within the three-dimensional space relative to the two-dimensional viewport.

Caddy shows the projection lines and the tag along characters to the cursor (see abstract).

Caddy cites "a conventional storage tube graphics display terminal having an addressable cross-hair cursor and a keyboard..." Cross-hair cursor is read as the project lines to the

cursor. Caddy also cites "the graphical plot viewed on the display terminal is further

enhanced by inclusion of labels, shaded areas, and reference symbols and characters..."

read as the tag along characters to the cursor. It would have been obvious to one of ordinary skill in the art, having the teachings of Takeda, Frasier et al., Lumelsky et al and Caddy

before them at the time the invention was made to modify the method for navigation a three-

dimensional space taught by Takeda, Frasier et al., and Lumelsky et al to include the

generating projection lines and characters to the cursor of Caddy, in order to provide a

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computer-aided process for producing original camera-ready graphical plots in full detail without requiring any manual drafting labor as taught by Caddy.

Allowable Subject Matter

Claims 7, 17 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the claim would be allowable because the prior art fails to teach or suggest concentric circles about the cursor to indicate the position of the cursor within the three-dimensional space relative to the two-dimensional viewport in combination with the other claim limitations.

Response to Arguments

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Applicant has argued that in Lumelsky there is no "generating a visual representation of the cursor to indicate the position of the cursor within the three-dimensional space relative to the two-dimensional viewport". However, the Examiner does not agree. Lumelsky teaches the limitation at column 3, line 65 through column 4, line 10 and column 4, lines 29-30.

Applicant's attention is directed to the line "There are also monoscopic depth cues which provide depth information irrespective of eye offset. These depth cues are effective because

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humans are conditioned to accepting them as conveying depth information...as objects move backwards and forwards in depth they appear to decrease and increase in size...that cause objects to lose their brightness and color...".

claimed

xx
1/02
Caddy shows the limitation at column 2, lines 5-20 and column 3, lines 5-12. Applicant's attention is directed to the line "a conventional storage tube graphics display terminal having an addressable cross hair cursor and a keyboard" read as the projection lines and "inclusion of labels, shaded areas, and reference symbols and characters" read as the tag-along characters.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

Responses to this action should be mailed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231. If applicant desires fax a response, (703) 746-7238, may be used for formal After Final communications, (703) 746-7239 for Official communications, or (703)

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746-7240 for Non-Official or draft communications. NOTE, A Request for Continuation (Rule 60 or 62) cannot be faxed.

Please label "PROPOSED" or "DRAFT" for information facsimile communications. For after final responses, please label "AFTER FINAL" or "EXPEDITED PROCEDURE" on the document.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Fourth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mylinh Tran whose telephone number is (703) 308-1304. The examiner can normally be reached on Monday-Thursday from 8.00AM to 6.30PM

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine Kincaid, can be reached on (703) 308-0640,

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3800.

Mylinh Tran

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Kristine Kincaid
KRISTINE KINCAID
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100